



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/767,386	01/28/2004	Warren Bruce Jackson	200312969-1	4749
22879 7590 01/29/2009 HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400				
EXAMINER				
PHILIPPE, GIMS S				
ART UNIT		PAPER NUMBER		
2621				
NOTIFICATION DATE		DELIVERY MODE		
01/29/2009		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

JERRY.SHORMA@HP.COM

mkraft@hp.com

ipa.mail@hp.com

Office Action Summary**Application No.**

10/767,386

Applicant(s)

JACKSON, WARREN BRUCE

Examiner

Gims S. Philippe

Art Unit

2621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 October 2008.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-30 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

Response to Amendment

1. Applicant's amendment received October 9th, 2008 has been fully considered and entered, but the arguments are not deemed to be persuasive.

Response to Arguments

2. The applicant argues that Yuasa fails to teach or suggest positioning an image on a non-planar surface to indicate a direction of a gaze and enhanced nonverbal communication associated with facial features. The examiner respectfully disagrees. In rejecting claims 1, 21 and 30, the examiner considered Utt's sphere to be the nonplanar surface as seen in fig. 1, surface 5 with three-dimensional convex shape where an image is being formed. To the examiner, the image being formed and displayed as noted in Utt paragraph [0030] and paragraph [0011], does meet the nonplanar surface as claimed. In addition, The limitation of the "surface indicating the direction of gaze" is met by Yuasa col. 8, lines 34-45. The applicant should note that Utt suggests defining the position of an object inside a nonplanar surface in fig. 6 and in Utt paragraph [0059], lines 7-14.

The applicant further argues that the documents provided teach away from of the invention. The examiner respectfully disagrees since the applicant's claims have not call for any feature that the proposed combination lacks. The applicant's arguments are

not reflected in the claims. In other words, the level of details argued by the applicant is not present in the claims.

The applicant further argues that his/her Figure illustrate the video system with non-planar display 102 with facial features 104. the nonplanar can be a three-dimensional head shape with an image generating display surface. The examiner respectfully disagrees since Yuasa provides the three-dimensional head shape in fig.1 and in fig. 11 with corresponding disclosure.

While the applicant argues that the combination of Utt and Yuasa does not teach the claimed limitations, the applicant does not compare both the prior art of record and the current application in order to identify the differences. The Gaze direction recognition apparatus as disclosed in col. 8, lines 34-45 is considered as meeting the limitations argued by the applicant.

The applicant further argues that his/her embodiments can position an image to indicate the position of the gaze of an individual whose facial features are being displayed. The examiner respectfully disagrees since such feature is present in col. 8, lines 34-67 where Yuasa suggest using a plurality of templates based on multiple similarity methods where the face area is extracted.

The applicant notes that Yuasa is directed to putting a face into an image processor to perform image recognition. The present application is also directed to image recognition. The Applicant further admits that although gaze direction is detected, it is not used to position any image presently claimed. The examiner respectfully disagrees. Particularly in col. 8, lines 55-67, Yuasa notes that a plurality of face parts are obtained from the input image, and a relative position among the plurality of facial parts is arranged. Yuasa further notes that a relative value is calculated by shifting the a standard face image previously registered on the input image... Yuasa continues in stating that in order to cope with various direction of face, if a plurality of templates based on multiple similarity method is used, the face area is more stably extracted. The examiner in pointing these passages wishes to convey the inherent direction of the gaze described by Yuasa. In addition, in col. 9, lines 18-28, Yuasa suggests the direction of gaze by noting that the eye pattern extraction section extracts an area including the eye based on position of the facial parts extracted by the eye pattern extraction where Yuasa outputs feature vector where the direction of gaze is given in col. 9, lines 35-39.

The applicant further argues that Trivedi does not disclose a positioning and does not disclose how the information is acquired. The examiner respectfully disagrees since positioning is clearly disclosed in Trivedi paragraphs [0069] and [0131].

The applicant presented similar arguments related to the direction of the gazing, it is the examiner's belief that all the arguments have been addressed.

The rejection is repeated below for the sake of completeness.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-7, 10-16, 21-25 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Utt et al. (US Patent Application Publication no. 2005/0017924 A1) in view of Yuasa et al. (US Patent no. 6690814).

Regarding claims 1, 21 and 30, Utt discloses the same method and apparatus for displaying facial feature comprising a non-planar surface (See Utt [0038]); an image generation device that creates an image with facial features on the non-planar surface (See Utt [0011, lines 1-5], [0012, lines 2-5]).

It is noted that although Utt provides a positioning system (See Utt [0059, lines 1-10]), it is silent about positioning the image on the non-planar surface to indicate a direction of gaze and enhance nonverbal communication associated with the facial features.

However, Yuasa discloses a positioning system which positions the image on the non-planar surface to indicate a direction of gaze and enhance nonverbal communication associated with the facial features (See Yuasa col. 8, lines 34-67).

Therefore, it is considered obvious that one skilled in the art at the time of the invention would recognize the advantage of modifying Utt's positioning system by providing Yuasa's positioning system which positions the image on the nonplanar surface to indicate a direction of gaze and enhance nonverbal communication associated with the facial features. The motivation for performing such a modification in Utt is to avoid problems such as not capturing a recognition object in an image, which results in an incorrect pattern recognition extraction as taught by Yuasa (See Yuasa col. 2, lines 47-55).

As per claims 2-5 and 22-25, most of the limitations of these claims have been noted in the above rejection of claim 1. In addition, Utt further discloses the same method and apparatus wherein the non-planar surface has the shape of a head, a sphere, a spheroid, or an oblong closed surface (See Utt [0030], [0034], [0038]).

As per claims 6-7, most of the limitations of these claims have been noted in the above rejection of claim 1. In addition, Utt further discloses the same method and apparatus wherein the image generation device comprises one or more projectors projecting light from within/outside the non-planar surface (See Utt fig. 1, and 11B).

As per claims 10-16, most of the limitations of these claims have been noted in the above rejection of claim 1. In addition, Utt further project the facial features onto the non-planar surface, wherein the facial features are from human (See [0038], and fig. 12).

It is noted that Utt is silent about the positioning system comprising one or more video collecting devices wherein the collecting devices using the specific camera claimed.

However, Yuasa discloses positioning system comprising one or more video collecting devices wherein the collecting devices including cameras (See Fig. 12, cameras 34 and 42).

Therefore, it is considered obvious that one skilled in the art at the time of the invention would recognize the advantage of modifying Utt by including Yuasa's cameras. The motivation for performing such a modification in Utt is to be able to analyze the facial pattern.

5. Claims 17-20, 28 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Utt et al. (US Patent Application Publication no. 2005/0017924 A1) in view of Yuasa et al. (US Patent no. 6690814) as applied to claims 1 and 21 above, and further in view of Trivedi et al. (US Patent Application no. 2006/0187305 A1). As per claims 17-20 and 28, most of the limitations of these claims have been noted in the above rejection of claims 1 and 21.

It is noted that the combination of Utt and Yuasa is silent about a speaker transmitting voice and other sound using microphones.

However, Trivedi discloses a speaker transmitting voice and other sound using microphones (See Trivedi [0138]).

Therefore, it is considered obvious that one skilled in the art at the time of the invention would recognize the advantage of modifying Utt and Yuasa's method and apparatus for displaying facial features by incorporating Trivedi's speaker transmitting voice and other sound using microphones. The motivation for performing such a modification in the combination of Utt and Yuasa is to detect a person's intention as taught by Trivedi (See Trivedi [00138, lines 5-6]).

As per claim 29, most of the limitations of the claims have been noted in the above rejection of claim 28.

It is noted that the combination of Utt and Yuasa is silent about transmitting live video feeds to a remote user.

However, Trivadi discloses a method and apparatus for displaying facial features including the steps of transmitting live video feed to a remote user (See Trivadi fig. 30).

Therefore, it is considered obvious that one skilled in the art at the time of the invention would recognize the advantage of modifying Utt and Yuasa's image generation device by including Trivadi' steps of transmitting live video feed to a remote user. The motivation for performing such a modification in Utt and Yuasa is to transmit

the facial features to multiple users either for security purpose or in a videoconference environment.

6. Claims 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Utt et al. (US Patent Application Publication no. 2005/0017924 A1) in view of Yuasa et al. (US Patent no. 6690814) as applied to claim 1 above, and further in view of Kalt (US Patent no. 6771237).

Regarding claims 8-9, most of the limitations of these claims have been noted in the above rejection of claim 1.

It is noted that the combination of Utt and Yuasa is silent about the image generation method and apparatus using a flexible display as specified in the claims.

However, discloses an image generation method using a flexible display (See Kalt col. 7, lines 37-55).

Therefore, it is considered obvious that one skilled in the art at the time of the invention would recognize the advantage of modifying the display of the proposed combination of Utt and Yuasa by incorporating Kalt's flexible display. The motivation for performing such a modification in the proposed combination is to provide, for example, an extended display area where such a flexible display may be portable and foldable as taught by Kalt (See Kalt col. 7, lines 42-53).

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gims S. Philippe whose telephone number is (571) 272-7336. The examiner can normally be reached on M-F (10:30-7:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on (571) 272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Gims S Philippe
Primary Examiner
Art Unit 2621

/G. S. P./
/Gims S Philippe/
Primary Examiner, Art Unit 2621